

WHAT IS CLAIMED IS:

1. A controller of a vehicle having an engine for use with an authorized key having a communication function, the
5 controller comprising:

a microcomputer for controlling the engine, the microcomputer being capable of communicating with the authorized key;

a recognizer activated when predetermined conditions,
10 including establishment of communication between the microcomputer and the authorized key, are satisfied to verify whether a vehicle occupant is an authorized user, the microcomputer enabling the starting of the engine when communication is established with the authorized key and the
15 recognizer verifies the vehicle occupant as being the authorized user.

2. The controller according to claim 1, wherein the vehicle includes a passenger compartment, a door, and a key
20 receiver arranged in the passenger compartment to receive the authorized key, the microcomputer transmits a request signal to a predetermined first area defined around the vehicle, and the authorized key outputs a response signal in response to the request signal, the microcomputer unlocking
25 the door when receiving the response signal and entering a regular mode to activate the recognizer when the door is opened, the microcomputer entering an irregular mode to keep the recognizer inactivated when the door is unlocked even though the response signal is not received, and the
30 microcomputer activates the recognizer in the irregular mode when communication is established with the authorized key received in the key receiver.

3. The controller according to claim 2, wherein the microcomputer transmits the request signal to a predetermined second area defined in the passenger compartment after the door is opened in the regular mode,
5 and the microcomputer activates the recognizer when receiving the response signal from the authorized key in response to the request signal.

4. The controller according to claim 1, wherein the
10 recognizer detects a distinctive feature of the vehicle occupant to verify that the vehicle occupant is the authorized user.

5. The controller according to claim 1, wherein the
15 recognizer images the vehicle occupant to generate image data and compares the image data with reference image data that is registered beforehand.

6. A method for controlling a vehicle having an
20 engine and a door, the method comprising:
transmitting a request signal to a predetermined area defined around the vehicle;
unlocking the door when receiving a response signal in response to the request signal;
25 verifying whether a vehicle occupant is an authorized user; and
enabling starting of the engine when the vehicle occupant is verified as the authorized user.

7. The method according to claim 6, wherein said
30 verifying includes detecting a distinctive feature of the vehicle occupant and comparing the detected distinctive feature with reference data that is registered beforehand.

8. The method according to claim 6, wherein said verifying includes imaging the vehicle occupant to generate image data and comparing the image data with reference image data that is registered beforehand.

5

9. The method according to claim 6, wherein said verifying is performed after the response signal is received and the door is opened.

10

10. The method according to claim 9, wherein said verifying is not performed unless a predetermined condition is satisfied when the door is unlocked even though the response signal is not received.

15

11. The method according to claim 10, wherein the vehicle includes a passenger compartment and the predetermined condition includes establishment of transponder communication with an authorized key located in a key receiver that is arranged in the passenger compartment of the vehicle.

20

12. A system for controlling an engine of a vehicle having a passenger compartment, the system comprising:

an authorized key capable of wireless communication;

25

a key receiver arranged in the passenger compartment of the vehicle to receive the authorized key;

a recognizer arranged in the passenger compartment to image a vehicle occupant and verify whether a vehicle occupant is an authorized user;

30

a communication circuit that performs wireless communication with the authorized key;

a microcomputer connected to the recognizer and the communication circuit, the microcomputer activating the

- recognizer when wireless communication is established between the authorized key and the communication circuit, enabling starting of the engine when the recognizer verifies that the vehicle occupant is an authorized user, and
- 5 disabling starting of the engine when wireless communication is not established between the authorized key and the communication circuit unless a predetermined condition is satisfied.